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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/552,281

07/12/2006

Markus Gesk

10191/4099

2007

26646 7590 09/23/2009

KENYON & KENYON LLP  
ONE BROADWAY  
NEW YORK, NY 10004

EXAMINER

HOGAN, JAMES SEAN

ART UNIT

PAPER NUMBER

3752

MAIL DATE

DELIVERY MODE

09/23/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/552,281	<b>Applicant(s)</b> GESK ET AL.	
	<b>Examiner</b> JAMES S. HOGAN	<b>Art Unit</b> 3752	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 June 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 8-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/27/09</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed June 25, 2009 have been fully considered but they are not persuasive. It is in the Examiner's opinion, based on the newly amended claims, that the order by which the perforated disc is constructed does not differentiate it from a disc that can combine the teachings as expressed below as part of its own manufacture.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 8-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,039,271 to Reiter in view of U.S. Patent No 6,405,946 to Harata et al.

As per claim 8, Reiter teaches part of a method for producing and securing an apertured disk (34) for a fuel injector for a fuel-injection system of an internal combustion engine. Shown is an apertured disk having an opening contour (39) which ensures a complete passage for a fluid, is shown as a metallic sheet having a constant thickness and having introducing at least one spray-discharge opening (39) in the center region, and is secured by impressing the disk (34) into a valve seat of a fuel injector and by being welded around its bottom seam in such a way that a lower end face of the valve-seat member delimits an intake region of the apertured disk such that

the at least one spray-discharge opening is covered. In step (b) of claim 8, Reiter does not teach material thickness reduction.

Harata et al shows reduced thickness in one region of a sheet disk shown in Figure 4 by "forming a depression" (Col. 4, line 32-35) onto a disk (60) on a valve seat of a fuel injector and by being welded around its bottom seam. It is not known if the depression is formed by embossing or impressing, however, it should be noted that the patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or an obvious variant from a product in the prior art, the claim is unpatentable even though the prior product was made by a different process (see MPEP 2113). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have reduced thickness in a material as in the disk of Reiter as shown by Harata et al, since it is known to reduce thickness by all forms of stamping and embossing, and after which forming apertures and then finishing the disk by machining, as both are known to have and affect on material by their implicit nature, and would further be desirable in order to provide a part with a desired thickness tolerance in order to ensure proper fitting into its designated placement within an apparatus.

As for, in step (c) of the claim, locating the opening in the region of reduced thickness, that thickness being reduced, (and as per claim 13) microscopically within the range of 0.05 mm to 0.01mm, that being the nature of material formed by impression, it would have been obvious to one having ordinary skill at the time the invention was

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made to have located the opening at a central point, as it is a natural location for such an opening.

Further, as in step (d) of the claim, the act of machining the sheet until an apertured disk has predefined outside dimensions attained is a known technique to one of ordinary skill and does not hold any patentable weight as it is used universally in the fuel injector art.

As per claims 9 and 11, neither Reiter nor Harata et al teach a particular material, however, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected as desired material for the disk, since it has been held to be within the skill of a worker to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice See in re Leshin, 125 USPQ 416.

As per claim 10, distributing excess material thrown up by embossing by further rolling the material is a known metalworking technique whose use is not given any patentable weight as it is used universally in the art.

As per claim 12, the act of grinding off excess material is a well known technique of material reduction, to one of ordinary skill and does not hold any patentable weight as it is used universally in the art of material modification.

As per claim 14, Reiter teaches its spray-discharge opening as being formed by drilling, erosion, stamping (Col. 2, lines 52-43).

As per claim 15, it can be positively argued that tooling designed to form a thickness by impressing or embossing its quite capable of forming a frustoconical

depression in the sheet, as regardless of the sharpness of sheet-metal tooling, radii will certainly be formed into the corners, edges or seams that are formed by the tool(s), such that it would have been obvious to one having ordinary skill in the art at the time the invention was made to have designed into the sheet a frustoconical depression.

***Conclusion***

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES S. HOGAN whose telephone number is (571)272-4902. The examiner can normally be reached on Mon-Fri, 6:00a-3:00p EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on (571)272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. S. H./

Examiner, Art Unit 3752

/Len Tran/

Supervisory Patent Examiner, Art Unit 3752